

Anthony W. Fava

Curriculum Vitae

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EDUCATION

Ph.D., Kinesiology - Specialization in Biomechanics, Auburn University, Auburn, AL. 2025

Dissertation Advisors: Gretchen Oliver, Ph.D., Matthew Miller, Ph.D., William Murrah., Ph.D., Jamie Roper, Ph.D.

Dissertation Title: The Influence of Practice Design Using Task Constraints to Develop a Pitch with Vertical Break in Softball.

M.A., Human Performance, University of Alabama, Tuscaloosa, AL. 2016

Thesis Advisors: Phillip Bishop, Ph.D., Michael Esco, Ph.D., Sara Tomek, Ph.D.

Thesis Title: Acute Effects of Exercise Between Sets on Upper-Body Power

B.S., Exercise Science, University of Alabama, Tuscaloosa, AL. 2011

PROFESSIONAL APPOINTMENTS

Current research focuses on understanding human movement and motor behavior from a biomechanics perspective with an emphasis on the upper extremity. In studying the development of movement skills through different training approaches and their impact on the musculoskeletal system we can promote strategies that aid motor performance and health.

Publications (18)

- 2026 Cheng, K. J., Jump, I. P., Zappa, R. M., **Fava, A. W.**, Klubertanz, M. R., Caplan, J. H., & Oliver, G. D. (2026). The Softball Pitching Plane (SPP): A Reliable Geometric Descriptor of Arm Trajectory and Its Relationship to Ball Velocity in Adolescent Pitchers. *Applied Sciences*, 16(2), 574.
- 2026 Holtz, K. A., Lerch, B., Zaremski, J. L., Butler, L., Ulman, S., Zappa, R., **Fava, A.**, & Oliver, G. D. (2026). A Description of Scapular Biomechanics in the Windmill Softball Pitch in Early High School Pitchers. *International Journal of Sports Medicine*, 47(01), 72-77.
- 2025 Zappa, R., **Fava, A.**, Lozowski, B., Kohler, E., & Oliver, G. D. (2025). Kinematic Comparison of Throw-Down Mechanics Between Baseball and Softball Catchers. *International Journal of Sports Medicine*.
- 2024 Lozowski, B., **Fava, A.**, Zaremski, J., & Oliver, G. Optimising a Baseball's Dimensions for Improved Throwing Patterns in Youth Players. *Journal of Sports Sciences*, 1-8.

- 2024 **Fava, A. W.**, Downs Talmage, J. L., van Hogerwou, T., & Oliver, G. D. (2024). Effects of a Simulated Game and Doubleheader Inning on Peak Kinetics in Softball Pitching Across Pitch Types. *The American Journal of Sports Medicine*.
- 2024 Giordano, K., Nebel, A. R., **Fava, A.**, & Oliver, G. D. (2024). Tall and Fall Versus Drop and Drive Strategy in College Baseball Pitchers for Velocity and Elbow Valgus Torque. *The American Journal of Sports Medicine*.
- 2024 **Fava, A.**, Barfield, J., van Hogerwou, T., Bordelon, N., Cassidy, M., & Oliver, G. D. (2024). Associations between Pelvis, Trunk, and Shoulder Girdle Muscle Activity, Age, and Scores during the Closed Kinetic Chain Upper Extremity Stability Test in Baseball Pitchers. *JOSPT Open*, 2(4), 1-24.
- 2024 Bordelon, N., **Fava, A.**, Friesen, K. B., Crotin, R. L., & Oliver, G. D. (2024). Kinematics of Hitting in Youth Baseball: Implications for Skill Development. *International Journal of Sports Medicine*. ***Awarded IJSM 2024 paper of the year.**
- 2024 Nebel, A. R., **Fava, A.**, Bordelon, N., & Oliver, G. D. (2023). Comparison of Elbow Flexion in Youth Baseball Pitchers with and without Throwing-Arm Pain. *Orthopaedic Journal of Sports Medicine*.
- 2023 Downs Talmage, J. Friesen, K. B., **Fava, A.**, Everheart, K., & Oliver, G. D. (2023). Effects of Increasing Pitch Count on Pitch Type Ball Metrics and Release Height in High School Softball Pitchers. *Sports Health*.
- 2023 Oliver, G. D., **Fava, A.**, Lozowski, B., Zaremski, J. L., Holtz, K. A., & Bowers, R. L. (2023). Evaluation of Hip Characteristics in Baseball and Softball Athletes with and Without Throwing Arm Pain. *International Journal of Sports Medicine*.
- 2023 Talmage, J. L. D., **Fava, A. W.**, Friesen, K. B., Bordelon, N. M., & Oliver, G. D. (2023). Range of Motion Adaptations During a Simulated Game Exposure in Softball Pitchers. *International Journal of Sports Medicine*.
- 2023 Nebel, A. R., **Fava, A. W.**, Bordelon, N. M., & Oliver, G. D. (2023). Comparison of Peak Shoulder Distraction Forces Between Pain and Pain-Free Youth Baseball Pitchers. *Orthopaedic Journal of Sports Medicine*, 11(6), 23259671231177320.
- 2023 Oliver GD, Lozowski B, **Fava AW**, Roper JA (2023). Validating Methods of the Standing Broad Jump Test. *Journal of Athletic Enhancement* 12:2.
- 2023 **Fava, A. W.**, Giordano, K. A., Friesen, K. B., Nguyen, A., & Oliver, G. D. (2023). Comparison of Trunk and Pelvic Kinematics in Youth Baseball Pitchers With and Without Upper Extremity Pain: A Cross-Sectional Study. *Orthopaedic Journal of Sports Medicine*, 11(1), 23259671221145679.

- 2023 Everhart, K. M., Friesen, K. B., Bordelon, N. M., **Fava, A. W.**, Plummer, H. A., Shannon, D. M., & Oliver, G. D. (2023). Single-Leg Squat and Reported Pain in Collegiate Softball Pitchers. *Orthopaedic Journal of Sports Medicine*, 11(1), 23259671221144757.
- 2022 Bordelon, N., Friesen, K., **Fava, A.**, Plummer, H., & Oliver, G. (2022). Peak Elbow Flexion Does Not Influence Peak Shoulder Distraction Force or Ball Velocity in NCAA Division I Softball Pitchers. *Orthopaedic Journal of Sports Medicine*, 10(1), 23259671211067828.
- 2022 **Fava, A. W.**, Downs Talmage, J. L., Plummer, H. A., & Oliver, G. D. (2022). Drive-Leg Kinematics During the Windup and Pushoff Is Associated With Pitching Kinetics at Later Phases of the Pitch. *The American Journal of Sports Medicine*, 50(5), 1409-1415.

Manuscripts Submitted (2)

- Jump, I. P., Friesen, K., Downs-Talmage, J., Zappa, R., Fava, A.W., & Oliver., G.D. Impact of the Lower Body on Softball Pitching *Accepted to OJSM (Page Proofs)*.
- Lozowski, B., **Fava, A.**, van Hogerwou, T., Bordelon., N., & Oliver, G. Kinematic Sequencing in Collegiate Softball Pitching and Hitting, and its impact on Ball Velocity. *Resubmitting to another journal*.

Manuscripts in Preparation (3)

- Fava, A.**, Lozowski, B., Plummer, H., Cheng, K.J., & Oliver, G. Relations Among External Oblique Muscle Activity and Rotational Kinematics on Hip-to-Shoulder Separation in Youth Baseball Pitchers. *Statistical analysis*.
- Fava, A.**, Downs Talmage, J., & Oliver, G. Influence of Warmup Practices on Throwing Arm Health. Rough draft of introduction and methods sections written. *Collecting questionnaire data*.
- Fava, A.**, & Oliver, G. Shoulder Stability Test Compensations and Throwing Mechanics. *Ongoing data collection*.

CONFERENCE ACTIVITY/PARTICIPATION

Podium Presentations (2)

- 2026 **Fava, A.**, Lozowski, B., Plummer, H., Cheng., K-J., Oliver, G.D. Trunk Contributions to Maximal Hip-to-Shoulder Separation Angle in Youth Baseball Pitchers. PRiSM, Austin, TX, January.

- 2021 Nguyen, A. **Fava, A.**, Bendyk, H. Ulmer, M. Stoner, A. The Changing Trends in the Impact Factor of Orthopedic Journals: A Review of the last 20 Years. AOA, Louisville, KY, October.

Oral Presentations (12)

- 2025 Keller, C., Oliver, G. D., **Fava, A. W.**, Lozowski, B. Influence of Ball Scaling on Pitching Kinetics in Youth Baseball: A Pilot Study. AU Research Symposium, Auburn, AL. March. – Award Winner.
- 2024 Oliver, G. D., **Fava, A. W.**, Nebel, A. R., & Giordano, K. Stride Strategy on Fastball Performance in Collegiate Baseball Pitchers. ISBS, Salzburg, Austria. July.
- 2023 **Fava, A. W.**, Downs-Talmage, J., & Bordelon, N., & Oliver, G. D. Stride-Leg Kinetics in Softball Pitchers Across a Simulated Game and Double Header. SEACSM, Greenville, SC. February.
- 2023 Novellino, C., **Fava, A.**, Nebel, A., O'Grady, C., Iandoli, J., Plummer, H., & Von Hogerwou, T., & Oliver, G. D. Shoulder Kinetics and Infrapinatus EMG During Deceleration Phase in Youth Baseball Pitchers. SEACSM, Greenville, SC. February.
- 2023 Downs Talmage, J., Bordelon, N. M., **Fava, A. W.**, & Oliver, G. Peak Rate of Trunk Energy Outflow Differs Between Pitch Types in Softball Pitchers. ISBS, Milwaukee, WI. July.
- 2023 Nebel, A. R., **Fava, A.**, Lozowski, B., Yanagita, Y., & van Hogerwou, T., & Oliver, G. D. Comparison of Peak Shoulder Distraction Forces Between Pain and Pain-Free Youth Baseball Pitchers. SEACSM, Greenville, SC. February.
- 2023 Nebel, A. R., **Fava, A. W.**, Bordelon, N. M., & Oliver, G. D. EASI Does it! Arm Stress in Youth Baseball Pitchers With and Without Pain. Midsouth Biomechanics Conference Abstract. Memphis, TN. February.
- 2023 Engelkes, M., Bordelon, N., Downs-Talmage, J., **Fava, A.**, Lozowski, B., Nebel, A., & Oliver, G. D. The Relationship Between Stride Mechanics at Foot Contact and Hitting Performance in Collegiate Softball Athletes. SEACSM, Greenville, SC. February.
- 2023 Poczatek, M. R., Lozowski, B., & **Fava, A. W.**, & Oliver, G. D. Should the Baseball be Adjusted to Better Suit Younger Players' Physical Characteristics? SEACSM, Greenville, SC. February.
- 2023 Mauldin, N. R., Nebel, A. R., **Fava, A. W.**, & Oliver, G. D. Comparing Elbow Flexion Angles at Ball Release in Pain and Pain-Free Youth Baseball Pitchers. Midsouth Biomechanics Conference Abstract. Memphis, TN. February.

- 2023 Baker, N., Lowzowski, B., Nebel, A. R., **Fava, A. W.**, Yanagita, Y., van Hogerwou, T., Bordelon, N. M., & Oliver, G. D. Angular Shoulder Velocities at Peak Elbow Valgus Torque in Baseball Players. Midsouth Biomechanics Conference Abstract. Memphis, TN. February.
- 2023 Lozowski, B., van Hogerwou, T., **Fava, A.**, Nebel, A., Yanagita, Y., & Oliver, G. Collegiate Softball Players use Multiple Sequences for Pitching and Hitting. Midsouth Biomechanics Conference Abstract. Memphis, TN. February.

Poster Presentations (29)

- 2026 **Fava, A. W.**, Miller, M., Sauers, E., & Oliver, G. Does Perceived Competence and Practice Type Influence Motor Performance in Softball Pitchers Developing a New Pitch Type? TACSM, Waco, TX. February.
- 2026 Betancurth, A. A., **Fava, A. W.**, & Sauers, E. Self-Reported Soreness Levels Differ in Shoulder Region After Learning a New Pitch in Fastpitch Softball. TACSM, Waco, TX. February.
- 2026 Torres-Colon, E. D., **Fava, A. W.**, & Sauers, E. J. (2026). Do Different Practice Approaches Affect Intrinsic Motivation Based on a Goal-Directed Behavior? TACSM, Waco, TX. February.
- 2025 Zappa, R. M., **Fava, A. W.**, Lozowski, B., & Oliver, G. D. Comparison Between Baseball and Softball Catchers' Throwing-Arm Kinematics. ASB, Pittsburg, PA. August.
- 2025 Cich, M. M., Zappa, R. M., Jump, I. P., **Fava, A. W.**, Oliver, G. D. Comparison of Intra-Individual Elbow Flexion Variability Between Healthy Elite Softball Pitchers and Pitchers Reporting Arm Pain. AOASM Clinical Conference, Ashville, NC. April.
- 2025 **Fava, A. W.**, Nebel, A. R., Yanagita, Y. Z., & Oliver, G. D. Influence of Throwing-Arm Pain on Intra-Individual Elbow Flexion Variability in Youth Baseball Pitchers. SEACSM, Greenville, SC. February.
- 2025 Jump, I. P., **Fava, A. W.**, Zappa, R. M., Lerch, B. G., Oliver, G. D. Counter Movement Jump Metrics and Elbow Kinetics in Collegiate Baseball Pitchers. SEACSM, Greenville, SC. February.
- 2025 Zappa, R. M., **Fava, A. W.**, Lozowski, B., Lerch, B. G., Oliver, G. D. No Differences in Throwing Kinematics Between High School and College Catchers With and Without Pain. SEACSM, Greenville, SC. February.
- 2025 Kohler, E. D., Zappa, R. M., **Fava, A. W.**, Lozowski, B., Oliver, G. D. Impact of Secondary Positions on Injury Rates in Youth and High School Pitchers. SEACSM, Greenville, SC. February.

- 2025 Lisenby, A., Oliver, G. D., Lozowski, B., **Fava, A.W.** Effects of Lower-Extremity Impulse Forces on Maximum Proximal Segment Rotation Velocity in Collegiate Softball Hitters. AU Research Symposium, Auburn, AL. March. – Award Winner.
- 2025 Poczatek, M., Oliver, G.D., Keller, C., Fava, A.W., Lozowski, B. Exploring Effects of Ball Scaling on Peak Segmental Velocities Timing In Youth Baseball. AU Research Symposium, Auburn, AL. March.
- 2024 Lisenby, A. K., **Fava, A. W.**, Lozowski, B., & Oliver, G. D. Effects of Rear-Foot Center of Pressure on the Application of Forces During College Softball Hitting. AU Research Symposium, Auburn, AL. March.
- 2024 Keller, C. M., Lozowski, B., **Fava, A. W.**, Nebel, A. R., Zappa, R. M., & Oliver, G. D. Kinematics Differences Between Fastball Non-Strikes and Strikes During Division I Baseball Games. SEACSM, Greenville, SC. February.
- 2024 Burgett, C., **Fava, A. W.**, Plummer, H., Lozowski, B., Nebel, A. R., Bordelon, N. M., & Oliver, G. D. External Oblique and Infrapinatus Muscle Activity in Chronological and Discordant Baseball Pitching Sequences. SEACSM, Greenville, SC. February.
- 2024 **Fava, A. W.**, Downs Talmage, J., Bordelon, N. M., & Oliver, G. D. Individual Constraints and Time Scale on Joint Coupling Patterns in Softball Pitchers. SEACSM, Greenville, SC. February.
- 2024 Green, M. L., Nebel, A. R., **Fava, A. W.**, Zappa, R. M., Bordelon, N. M., & Oliver, G. D. Isometric Strength Ratios Differ Between Youth Baseball Players With and Without Upper Extremity Pain. SEACSM, Greenville, SC. February.
- 2023 Nebel, A. R., **Fava, A. W.**, Bordelon, N. M., & Oliver, G. D. Efficiency Index Used to Assess Shoulder Stress in College Softball Pitchers Throughout a Simulated Game. ISBS, Milwaukee, WI. July
- 2023 Agee, T; Bordelon, N; Everhart, K; **Fava, A**; Lozowski, B; Yanagita, Y; Nebel, A; & G. Oliver. Lower Body Power is Related to Hitting Performance in Youth Baseball Athletes. SEACSM, Greenville, SC. February.
- 2023 Bekish, P., Yanagita, Y., Nebel, A. R., **Fava, A. W.**, Lowzowski, B., van Hogerwou, T., Bordelon, N. M., & Oliver, G. D. Scapular Anterior and Posterior Tilt of Youth Baseball Pitchers in Pain and Non-Pain Groups. Midsouth Biomechanics Conference Abstract. Memphis, TN. February.
- 2022 Yanagita, Y., **Fava, A.**, Bordelon, N., Everhart, K., Lozowski, B., & Oliver, G. A Comparison of Trunk Energy Flow, Shoulder Distraction Force, and Pitch Speed Between Youth and Collegiate Softball Pitchers. ISG, Delft, Netherlands.

- 2021 Bordelon, N., **Fava, A.**, Everheart, K., Dugas, J., & Oliver, G. Incidence of Pain in Youth Softball Pitchers & Positional Players. SEACSM, Greenville, SC. February.
- 2021 Novellino, C., **Fava, A.**, Bordelon, N., Nguyen, A., & Oliver, G. Comparing Kinetics of Pitch Type Between Youth Baseball Between Youth Baseball Pitchers With and Without UE Pain. SEACSM, Greenville, SC. February.
- 2021 **Fava, A.**, Downs Talmage, J., & Oliver, G. Leg Stiffness and Pitch Types in High School Baseball Players. SEACSM, Greenville, SC. February.
- 2021 **Fava, A.** Downs-Talmage, J. Plummer, H. Oliver, G. The Effects of Drive-Leg Knee Valgus Angle on Ground Reaction Forces During Baseball Pitching. ISB, Stockholm, Sweden, July.
- 2021 McCullough, MB., Bordelon, N., Friesen, K., **Fava, A.**, Everheart, K., & Oliver, G. Pelvis & Trunk Kinematic Differences Exist Between Baseball Tee and Front Toss Hitting. SEACSM, Greenville, SC. February.
- 2021 **Fava, A.** Downs, J. Plummer, H. Oliver, G. Bordelon, N. Nguyen, A. Ground Reaction Forces Associated With the Wind-Up Motion in High School Baseball Pitchers. SEACSM Virtual Annual Meeting, February.
- 2021 Bordelon, N. Wasserberger, K. Downs, J. Friesen, K. Giordano, K. **Fava, A.** Brittain, A. Washington, J. Oliver, G. Comparison Between Front and Back-side Upper Extremity and Pelvis Segment Energy Flow During the Softball Swing. SEACSM Virtual Annual Meeting, February.
- 2016 **Fava, Anthony W.** Bishop, Phillip A. Esco, Michael R. Tomek, Sara. Truhett, Seth. Acute Effects of Exercise Between Sets on Upper-Body Power. NSCA National Conference, New Orleans, LA. July.
- 2015 **Fava, Anthony W.** Nickerson, Brett S. Richardson, Mark. Esco, Michael R. Reliability of Hand-To-Foot Bioelectrical Impedance After an Acute Period of Passive Heating. NSCA National Conference, Orlando, FL. July.

Conference Abstracts (2)

- 2016 Kopek, T. **Fava, A.** Liles, B. Fleming, M. Esco, M. Influence of Foam Rolling on Vertical Jump Performance. *Journal of Strength & Conditioning Research Supplement*, 30(1), S157.
- 2016 Enquist, E. Richardson, M. Esco, M. Lynd, A. Snarr, R. Hallmark, A. Allen, K. **Fava, A.** The Relationship Between Physical Fitness Variables, Body Mass Index, and Predicted Body Fat Percentage in Physically Active Young Adults. *Journal of Strength & Conditioning Research Supplement*, 30(1), S73.

TEACHING EXPERIENCE

Postdoctoral Scholar, Our Lady of the Lake University, 2025 – present

Department of Life Sciences & Human Performance

Exercise Programming & Prescription (KINE 4305)

Biomechanics (KINE 3377)

Strength & Conditioning (KINE 3357)

Functional Anatomy (KINE 1320/2390)

Adjunct Faculty, Auburn University, 2025 – present

School of Kinesiology

Principles of Sport Coaching (KINE 3820)

Graduate Teaching Assistant, Auburn University, 2021 - 2025

School of Kinesiology

Training & Conditioning Programming (KINE 4880)

Biomechanics Laboratory (KINE 3621)

Coaching the Mental Side of Sports (KINE 3840)

Principles of Sport Coaching (KINE 3820)

Medical Terminology for Allied Health Professions (KINE 3000)

Kettlebell Training (PHED 1380)

Active Auburn (PHED 1000)

Kinesiology - Outstanding Doctoral Student; 2024-2025

Kinesiology - Outstanding Doctoral Student Nomination; 2023-2024

Kinesiology - GTA of the Month; February 2022

Adjunct Faculty, Texas A&M International University, 2016 - 2017

Department of Curriculum & Pedagogy

Introduction to physical education, exercise science & sport

Graduate Teaching Assistant, University of Alabama, 2015 - 2016

Department of Kinesiology

Beginner weight training, Instructor of record

Running, Instructor of record

Rock climbing, Instructor of record

Mentorship

Collaborating with motivated individuals helps to facilitate the outcomes of a research laboratory. Semester-long training of undergraduate researchers in the following areas: laboratory procedures for data collection, data processing, variable definitions, conceptualization of research questions, research methodology, statistical approaches, and abstract submissions with conference attendance.

OLLU Kinesiology Lab (2025-2026)

Alyah Betancurth, Eli Torres-Colon

AU Sports Medicine & Movement Lab Mentees (2020-2025)

McLain Skinner, Chris Novellino, Zoe Smith, Noah Baker, Carlee Burgett, Aubrie Lisenby, Rebecca Herndon

Undergraduate Research Fellowship Mentee

Aubrie Lisenby: Rear and Lead Leg Impulse on Rotational Hitting Kinematics in Collegiate Softball Players (2024-2025)

Aubrie Lisenby: Effects of Rear-Foot Center of Pressure on the Application of Forces During Collegiate Softball Hitting (2023-2024)

RELATED PROFESSIONAL SKILLS

Certified Strength and Conditioning Specialist (CSCS), National Strength and Conditioning Association

NON-ACADEMIC WORK**Strength & Conditioning Staff Intern University of Alabama, 2014 - 2017**

Sports: Football, Track & Field, Women's Rowing, Women's Soccer

Strength & Conditioning Staff Intern Stony Brook University, 2013 - 2014

Sports: All 16 Men's & Women's Sports

DCH Northport Medical Center, 8/2011 - 12-2011

Cardiac Rehab Intern

PROFESSIONAL MEMBERSHIPS/AFFILIATIONS

National Strength and Conditioning Association (2012)

American College Sports Medicine (2020)

American Baseball Biomechanics Society (2021)

COMMUNITY INVOLVEMENT/OUTREACH

Delivered lecture and workshop on "Motor Learning" as part of a STEM event hosted by OLLU and TAXSM (2025)

Nick Saban Football Camp (2016 - 2017)

Delivered lectures and workshops on "Forces" as part of a four-week STEM event hosted by University of Alabama Kinesiology Department (2016)

Camp Ozark Counselor (2011)

REFERENCES

Gretchen Oliver
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